

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	ASCHENBRENNER et al.	Examiner:	Pham, Thierry L.
Serial No.:	09/507,022	Group Art Unit:	2624
Filed:	February 18, 2002	Docket No.:	BLD990044US1 (IBMN.005-0520)
Title:	METHOD, DATA STRUCTURE AND APPARATUS FOR PROVIDING OBJECT LEVEL RENDERING CONTROL USING TAGGED SECONDARY RESOURCES		

APPEAL BRIEF

MAIL STOP APPEAL
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This is an Appeal Brief submitted pursuant to 37 C.F.R. § 41.37 for the above-referenced patent application. Please charge Deposit Account No. 50-3669 (BLD990044US1) in the amount of \$500.00 for this brief in support of appeal as indicated in 37 C.F.R. § 41.20(b)(2).

I. Real Party in Interest

The real party in interest is International Business Machines Corporation, having a place of business at New Orchard Road, Armonk, New York 10504. This application is assigned to International Business Machines Corporation.

II. Related Appeals and Interferences

Appellants are unaware of any related appeals, interferences or judicial proceedings.

III. Status of Claims

Claims 1-47 were rejected. Claims 1-47 are presented for appeal and may be found in the attached Appendix of Appealed Claims in their present form.

IV. Status of Amendments

No amendments to the claims were made subsequent to the final rejection of Appellants' application.

V. Summary of Invention

The present invention provides a page layout structure that includes an include object structure, which signals inclusion of an object identifying rendering control data that is mapped in the mapping structure.

Independent claim 1 presents a data structure that includes a mixed object document structure (410, page 28, lines 1-2). The mixed object document structure includes a mapping structure (402, page 28, lines 9-12) and a page layout structure (414-432, page 28, line 19 to page 29, line 11). The mapping structure includes at least one mapping reference (404, page 28, lines 13-14) identifying a set of rendering control data (405, page 28, lines 14-17) as a secondary resource. The page layout structure includes an include object structure (418, page 29, lines 1-2), which signals inclusion of an object identifying rendering control data (405, page 28, lines 14-17) mapped in the mapping structure (402, page 28, lines 9-12) for use in rendering the object.

Independent claim 11 presents a method for providing object level management using tagged secondary resources. The method includes generating a mapping structure (402, page 28, lines 9-12) that includes at least one mapping reference (404, page 28, lines 13-14) identifying a set of rendering control data (405, page 28, lines 14-17) as a secondary

resource. A page layout structure (414-432, page 28, line 19 to page 29, line 11) is generated that includes at least one include object structure (418, page 29, lines 1-2), which signals inclusion of an object identifying rendering control data (405, page 28, lines 14-17) mapped in the mapping structure (402, page 28, lines 9-12) for use in rendering the object. A page is printed (580, page 29, line 21) according to the at least one include object structure, at least one object on the page being rendered according to mapped rendering control data identified by the at least one object.

Independent claim 18 presents a method for providing object level management for a page using tagged secondary resources. The method includes determining whether a document datastream includes a mapping structure comprising at least one mapping reference identifying a set of rendering control data as a secondary resource (510, page 29, line 14). Rendering control data identified by the at least one mapping reference is obtained for access by the printer (530, page 29, lines 17-18). A document is prepared for printing according to a page layout structure that includes at least one include object structure, the at least one include object structure signaling inclusion of an object identifying rendering control data mapped in the mapping structure for use in rendering the object (560, page 29, lines 20-21). A page is printed according to the at least one include object structure, at least one object on the page being rendered according to mapped rendering control data identified by the at least one object (580, page 29, line 21).

Independent claim 25 presents a system 100 for providing object level management for a page. The system 100 includes a print server (120, page 20, lines 4-5) for receiving an application datastream (112, page 20, lines 6-7) defining a document containing objects for printing and creating a printer datastream (132, page 21, lines 10-17) that is specific to a

destination printer engine (160, page 21, lines 21-22) in order to integrate with the printer's specific capabilities and command set. A control unit (130, page 21, lines 18-19) maintains cached objects (140, page 21, lines 18-19), wherein the control unit further includes a raster image processor (150, page 21, line 19) for rendering object according to commands provided by the print server in the printer datastream. The application datastream (112, page 20, lines 6-7) includes a mixed object document structure (410, page 28, lines 1-2). The mixed object document structure includes a mapping structure (402, page 28, lines 9-12) and a page layout structure (414-432, page 28, line 19 to page 29, line 11). The mapping structure includes at least one mapping reference (404, page 28, lines 13-14) identifying a set of rendering control data (405, page 28, lines 14-17) as a secondary resource. The page layout structure includes an include object structure (418, page 29, lines 1-2), which signals inclusion of an object identifying rendering control data (405, page 28, lines 14-17) mapped in the mapping structure (402, page 28, lines 9-12) for use in rendering the object.

Independent claim 34 presents an article of manufacture that includes a program storage medium (192, page 22, line 1) readable by a computer (190, page 21, line 23), wherein the medium tangibly embodies one or more programs of instructions executable by the computer to perform a method for providing object level management for a page. The method includes generating a mapping structure (402, page 28, lines 9-12) that includes at least one mapping reference (404, page 28, lines 13-14) identifying a set of rendering control data (405, page 28, lines 14-17) as a secondary resource. A page layout structure (414-432, page 28, line 19 to page 29, line 11) is generated that includes at least one include object structure (418, page 29, lines 1-2), which signals inclusion of an object identifying rendering control data (405, page 28, lines 14-17) mapped in the mapping structure (402, page 28, lines

9-12) for use in rendering the object. A page is printed (580, page 29, line 21) according to the at least one include object structure, at least one object on the page being rendered according to mapped rendering control data identified by the at least one object.

Independent claim 41 presents an article of manufacture that includes a program storage medium (192, page 22, line 1) readable by a computer (190, page 21, line 23), wherein the medium tangibly embodying one or more programs of instructions executable by the computer to perform a method for providing object level management for a page. The method includes determining whether a document datastream includes a mapping structure comprising at least one mapping reference identifying a set of rendering control data as a secondary resource (510, page 29, line 14). Rendering control data identified by the at least one mapping reference is obtained for access by the printer (530, page 29, lines 17-18). A document is prepared for printing according to a page layout structure that includes at least one include object structure, the at least one include object structure signaling inclusion of an object identifying rendering control data mapped in the mapping structure for use in rendering the object (560, page 29, lines 20-21). A page is printed according to the at least one include object structure, at least one object on the page being rendered according to mapped rendering control data identified by the at least one object (580, page 29, line 21).

VI. Grounds of Rejection

Appellant has attempted to comply with new rule 37 C.F.R. § 41.37(c) by providing the Office Action's grounds of rejection verbatim, followed by an argument section corresponding thereto.

- A. On page 2 of the Office Action, claims 1-24 and 34-47 were rejected under 35 U.S.C. 103(a) as being unpatentable over Lipton (US 5835098) in view of Hohensee et al (US 5813020).
- B. On page 11 of the Office Action, claims 25-33 were rejected under 35 U.S.C. 103(a) as being unpatentable over Lipton (US 5835098) in view of Hohensee et al (US 5813020) and in further view of Hohensee et al (US 5727220).

VII. Argument

- A. **INDEPENDENT CLAIMS 1, 11, 18, 25, 34 AND 41 ARE PATENTABLE OVER LIPTON IN VIEW OF HOHENSEE ET AL. ('020) AND IN FURTHER VIEW OF HOHENSEE ET AL. ('220).**
 - 1. **LIPTON, HOHENSEE ET AL. ('020) AND HOHENSEE ('220), ALONE OR IN COMBINATION, DO NOT DISCLOSE, TEACH OR SUGGEST A MIXED OBJECT DOCUMENT STRUCTURE THAT INCLUDES A MAPPING STRUCTURE AND A PAGE LAYOUT STRUCTURE WHEREIN THE MAPPING STRUCTURE INCLUDES A MAPPING REFERENCE IDENTIFYING A SET OF RENDERING CONTROL DATA AND THE PAGE LAYOUT STRUCTURE INCLUDES AN INCLUDE OBJECT STRUCTURE THAT SIGNALS INCLUSION OF THE OBJECT IDENTIFYING RENDERING CONTROL DATA THAT WAS MAPPED IN THE MAPPING STRUCTURE.**

Lipton merely describes a process for managing color profiles. An object is presented in a page according to an include object structured field. Each time an object is referenced, alternate display presentation parameters for the object is specified within the include object structured field. Thus, Lipton fails to suggest an include object structure that signals

inclusion of the object identifying rendering control data that was mapped in the mapping structure.

According to claims 1, 11, 18, 25, 34 and 41 of the present invention, the include object structure field does not specify parameters for the object. Rather, the include object structure field includes an object that references rendering data that was mapped earlier in the datastream by the mapping structure. Lipton does not even mention such a mapping structure.

In addition, Lipton fails to teach, disclose or suggest a mixed object document structure. Lipton merely suggests including color objects in a data stream. Lipton does not suggest the inclusion of other types of objects.

Still further, Lipton teaches away from Applicants' invention by teaching that a profile is defined when an object is created and storing the profile on the system. According to Lipton, a profile must be embedded in the document if the document is going to be rendered on other systems. Therefore, Lipton requires that either a color profile manager be able to find a color profile in the system folder or the color profile be embedding in the document. As indicated in Fig. 4, Lipton requires that the color profile be created by the client or embedding in the document.

Accordingly, Applicants respectfully submit that independent claims 1, 11, 18, 25, 34 and 41 are patentable over Lipton.

Hohensee '020 fails to overcome the deficiencies of Lipton. Hohensee '020 merely discloses placing a color identification in a document at each location where the color profile is used. Thus, the entire color profile does not need to be embedded in the document at each location where a color profile object is located within the document.

More specifically, a color profile identification for each of the color profile objects is created. Each of the color profile objects located in the document is specified by placing in the document the color profile identification which corresponds to the color profile object in each location where the color profile object is used.

Accordingly, Hohensee '020 merely discloses a method for eliminating the need to embed the entire color profile in the document multiple times by using color profile identifications to refer to the color profile associated with the color profile object.

However, Hohensee '020 fails to suggest a page layout structure that includes an include object structure, which signals inclusion of an object identifying rendering control data that is mapped in the mapping structure. Hohensee '020 merely discloses using an identification provided in the document at the location of the color profile object that refers to the appropriate color profile embedded in the document.

Hohensee '020 does not even hint at tying a profile to each object, mapping the profile in a mapping structure and independently signaling inclusion of the object mapped in the mapping structure.

Appellant's include object structure and mapping structure work together to provide a method wherein profiles for objects may be made portable. By tying a profile to each object, mapping the profile in a mapping structure and independently signaling inclusion of the object mapped in the mapping structure, the object may be moved to a different document or system thereby making the object itself portable rather than just the document.

Hohensee '020 further teaches away from the present invention as recited in independent claim s1, 11, 18, 25, 34 and 41 because Hohensee '020 teaches that if the document is to be portable, the color profile object must be embedded in the document.

According to Hohensee '020, if the color profile was not created on the system rendering the document, the color profile must be embedded to be output on another system.

Accordingly, Lipton and Hohensee '020, alone or in combination, fail to disclose, teach or suggest the invention as recited in independent claims 1, 11, 18, 25, 34 and 41.

Hohensee '220 fail to overcome the deficiencies of Lipton and Hohensee '020. The Office Action cited Hohensee '220 as teaching a print server and a control unit as recited in independent claim 25. However, Hohensee '220 fails to disclose, teach or suggest a page layout structure that includes an include object structure, which signals inclusion of an object identifying rendering control data that is mapped in the mapping structure. Hohensee '220 does not mention using a mapping structure to enable profiles for objects to be portable.

Lipton, Hohensee '020 and Hohensee '220 fail to disclose the use of an include object structure and mapping structure having functions that are integrated to provide a set of rendering control data as a secondary resource and-an include object structure that signals inclusion of an object identifying rendering control data that was mapped in the mapping structure.

As described above, Appellant's include object structure and mapping structure work together to provide a method wherein profiles for objects may be made portable. By tying a profile to each object, mapping the profile in a mapping structure and independently signaling inclusion of the object mapped in the mapping structure, the object may be moved to a different document or system thereby making the object itself portable rather than just the document.

Lipton, Hohensee '020 and Hohensee '220 fail to disclose a mixed object document structure that includes both a mapping structure and a page layout structure wherein an

include object structure in the page layout structure signals inclusion of an object identifying rendering control data mapped in the mapping structure.

Accordingly, Appellant's respectfully submit that independent claims 1, 11, 18, 25, 34 and 41 are patentable over Lipton, Hohensee '020 and Hohensee '220.

VIII. Conclusion

In view of the above, Appellant submits that the rejections are improper, the claimed invention is patentable, and that the rejections of claims 1-47 should be reversed. Appellants respectfully request reversal of the rejections as applied to the appealed claims and allowance of the entire application.

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APPENDIX OF APPEALED CLAIMS FOR APPLICATION NO. 09/507,022

1 1. (Previously Presented) A data structure embodied in a tangible
2 computer readable medium for providing object level management of a document datastream
3 in a print system using tagged secondary resources, the data structure comprising:
4 a mixed object document structure, wherein the mixed object document structure
5 further comprising:
6 a mapping structure; and
7 a page layout structure;
8 wherein the mapping structure includes at least one mapping reference
9 identifying a set of rendering control data as a secondary resource, and wherein the page
10 layout structure includes an include object structure, the include object structure signaling
11 inclusion of an object identifying rendering control data mapped in the mapping structure for
12 use in rendering the object.

1 2. (Original) The data structure of claim 1 wherein a plurality of mapping
2 structures are provided.

1 3. (Original) The data structure of claim 2 wherein a plurality of include
2 object structures to an object reference the identified rendering control data.

1 4. (Original) The data structure of claim 1 wherein a plurality of include
2 object structures to an object are provided for referencing identified rendering control data.

1 5. (Original) The data structure of claim 1 wherein the rendering control
2 data comprises source calibration parameters.

1 6. (Original) The data structure of claim 5 wherein the source calibration
2 parameters comprise a color profile.

1 7. (Original) The data structure of claim 5 wherein the source calibration
2 parameters comprise halftoning parameters.

1 8. (Original) The data structure of claim 1 wherein the rendering control
2 data comprises text rendering parameters.

1 9. (Original) The data structure of claim 1 wherein the rendering control
2 data comprises vector graphic rendering parameters.

1 10. (Original) The data structure of claim 1 wherein the rendering control
2 data comprises image rendering parameters.

1 11. (Previously Presented) A method for providing object level
2 management using tagged secondary resources, comprising:
3 generating a mapping structure that includes at least one mapping reference
4 identifying a set of rendering control data as a secondary resource; and
5 generating a page layout structure that includes at least one include object structure,
6 the at least one include object structure signaling inclusion of an object identifying rendering
7 control data mapped in the mapping structure for use in rendering the object; and
8 printing a page according to the at least one include object structure, at least one
9 object on the page being rendered according to mapped rendering control data identified by
10 the at least one object.

1 12. (Original) The method of claim 11 wherein the rendering control data
2 comprises source calibration parameters.

1 13. (Original) The method of claim 12 wherein the source calibration
2 parameters comprise a color profile.

1 14. (Original) The method of claim 12 wherein the source calibration
2 parameters comprise halftoning parameters.

1 15. (Original) The method of claim 11 wherein the rendering control data
2 comprises text rendering parameters.

1 16. (Original) The method of claim 11 wherein the rendering control data
2 comprises vector graphic rendering parameters.

1 17. (Original) The method of claim 11 wherein the rendering control data
2 comprises image rendering parameters.

1 18. (Previously Presented) A method for providing object level
2 management for a page using tagged secondary resources, comprising:
3 determining whether a document datastream includes a mapping structure
4 comprising at least one mapping reference identifying a set of rendering control data as a
5 secondary resource; and
6 obtaining rendering control data identified by the at least one mapping reference for
7 access by the printer;
8 preparing a document for printing according to a page layout structure that includes
9 at least one include object structure, the at least one include object structure signaling
10 inclusion of an object identifying rendering control data mapped in the mapping structure
11 for use in rendering the object; and
12 printing a page according to the at least one include object structure, at least one
13 object on the page being rendered according to mapped rendering control data identified by
14 the at least one object.

1 19. (Original) The method of claim 18 wherein the rendering control data
2 comprises source calibration parameters.

1 20. (Original) The method of claim 19 wherein the source calibration
2 parameters comprise a color profile.

1 21. (Original) The method of claim 19 wherein the source calibration
2 parameters comprise halftoning parameters.

1 22. (Original) The method of claim 18 wherein the rendering control data
2 comprises text rendering parameters.

1 23. (Original) The method of claim 18 wherein the rendering control data
2 comprises vector graphic rendering parameters.

1 24. (Original) The method of claim 18 wherein the rendering control data
2 comprises image rendering parameters.

1 25. (Previously Presented) A system for providing object level
2 management for a page, comprising:
3 a print server for receiving an application datastream defining a document containing
4 objects for printing and creating a printer datastream that is specific to a destination printer
5 engine in order to integrate with the printer's specific capabilities and command set; and
6 a control unit for maintaining cached objects, the control unit further comprising a
7 raster image processor for rendering object according to commands provided by the print
8 server in the printer datastream;
9 wherein the application datastream comprises a mixed object document structure,
10 wherein the mixed object document structure further comprising:
11 a mapping structure; and
12 a page layout structure;
13 wherein the mapping structure includes at least one mapping reference
14 identifying a set of rendering control data as a secondary resource, and wherein the page
15 layout structure includes an include object structure, the include object structure signaling
16 inclusion of an object identifying rendering control data mapped in the mapping structure for
17 use in rendering the object.

1 26. (Original) The system of claim 25 wherein the secondary resource is
2 shipped resident in the printer.

1 27. (Original) The system of claim 25 wherein the secondary resource is
2 downloaded by the print server based upon the mapping when the secondary resource is not
3 resident.

1 28. (Original) The system of claim 25 wherein the rendering control data
2 comprises source calibration parameters.

1 29. (Original) The system of claim 28 wherein the source calibration
2 parameters comprise a color profile.

1 30. (Original) The system of claim 28 wherein the source calibration
2 parameters comprise halftoning parameters.

1 31. (Original) The system of claim 25 wherein the rendering control data
2 comprises text rendering parameters.

1 32. (Original) The system of claim 25 wherein the rendering control data
2 comprises vector graphic rendering parameters.

1 33. (Original) The system of claim 25 wherein the rendering control data
2 comprises image rendering parameters.

1 34. (Previously Presented) An article of manufacture comprising a program
2 storage medium readable by a computer, the medium tangibly embodying one or more
3 programs of instructions executable by the computer to perform a method for providing
4 object level management for a page, the method comprising:
5 generating a mapping structure that includes at least one mapping reference
6 identifying a set of rendering control data as a secondary resource; and
7 generating a page layout structure that includes at least one include object structure,
8 the at least one include object structure signaling inclusion of an object identifying rendering
9 control data mapped in the mapping structure for use in rendering the object; and
10 printing a page according to the at least one include object structure, at least one
11 object on the page being rendered according to mapped rendering control data identified by
12 the at least one object.

1 35. (Original) The article of manufacture of claim 34 wherein the rendering
2 control data comprises source calibration parameters.

1 36. (Original) The article of manufacture of claim 35 wherein the source
2 calibration parameters comprise a color profile.

1 37. (Original) The article of manufacture of claim 35 wherein the source
2 calibration parameters comprise halftoning parameters.

1 38. (Original) The article of manufacture of claim 34 wherein the rendering
2 control data comprises text rendering parameters.

1 39. (Original) The article of manufacture of claim 34 wherein the rendering
2 control data comprises vector graphic rendering parameters.

1 40. (Original) The article of manufacture of claim 34 wherein the rendering
2 control data comprises image rendering parameters.

1 41. (Previously Presented) An article of manufacture comprising a program
2 storage medium readable by a computer, the medium tangibly embodying one or more
3 programs of instructions executable by the computer to perform a method for providing
4 object level management for a page, the method comprising:
5 determining whether a document datastream includes a mapping structure comprising
6 at least one mapping reference identifying a set of rendering control data as a secondary
7 resource; and
8 obtaining rendering control data identified by the at least one mapping reference for
9 access by the printer;
10 preparing a document for printing according to a page layout structure that includes at
11 least one include object structure, the at least one include object structure signaling inclusion
12 of an object identifying rendering control data mapped in the mapping structure for use in
13 rendering the object; and
14 printing a page according to the at least one include object structure, at least one
15 object on the page being rendered according to mapped rendering control data identified by
16 the at least one object..

1 42. (Original) The article of manufacture of claim 41 wherein the rendering
2 control data comprises source calibration parameters.

1 43. (Original) The article of manufacture of claim 42 wherein the source
2 calibration parameters comprise a color profile.

1 44. (Original) The article of manufacture of claim 42 wherein the source
2 calibration parameters comprise halftoning parameters.

1 45. (Original) The article of manufacture of claim 41 wherein the rendering
2 control data comprises text rendering parameters.

1 46. (Original) The article of manufacture of claim 41 wherein the rendering
2 control data comprises vector graphic rendering parameters.

1 47. (Original) The article of manufacture of claim 41 wherein the rendering
2 control data comprises image rendering parameters.

APPENDIX OF EVIDENCE FOR APPLICATION NO. 09/507,022

Appellants are unaware of any evidence submitted in this application pursuant to 37 C.F.R. §§ 1.130, 1.131, and 1.132.

APPENDIX OF RELATED PROCEEDINGS FOR APPLICATION NO. 09/507,022

As stated in Section II above, Appellants are unaware of any related appeals, interferences or judicial proceedings.